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Unveiling the Enablers, Intermediaries & Responses: A Consumption Value-Based Sustainability Framework for FMCG Firms

Khurram Nasarullah Khan[1], Junaid Rehman*[2], Muhammad Zahid[3], Asma Rahim Chang[4]

[1]Mohammad Ali Jinnah University, Karachi, Pakistan. Email: kkinstructor@yahoo.com
ORCID: https://orcid.org/0009-0002-5968-3574
[2]Mohammad Ali Jinnah University, Karachi, Pakistan. Email: junaid.rehman@jinnah.edu
ORCID: https://orcid.org/0000-0002-3397-5707
[3]Begum Nusrat Bhutto Women University, Sukkur, Pakistan.
Email: muhammad.zahid@bnbwu.edu.pk | ORCID: https://orcid.org/0009-0003-4897-439X
[4]Institute of Business Management, Karachi, Pakistan. Email: asma.rahimchang@gmail.com
ORCID: https://orcid.org/0000-0001-8477-4561
**Corresponding author*

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Abstract

The world is gradually sinking into landfills caused by non-biodegradable products that are irresponsibly consumed and disposed-off by the humans. Such irresponsible resource consumption patterns lead to increased carbon footprints and consequently the environmental degradation. Countries are witnessing a rapidly inflowing Generation Z (GenZ) consumer market that purchases and consumes FMCG products which results in significant waste generation in both urban the rural dwellings. This study presents a novel conceptual framework for FMCG firms, i.e., *"Consumption Value-Based Sustainability Framework (CVBSF)"* by evaluating the role of Consumption Values towards promoting Sustainable Consumption Attitude and how it eventually leads to Sustainable Consumption Behavior of GenZ population when it comes to consuming FMCG products under the influence of Environmental Concerns. In this regard, Theory of Consumption Value (TCV) and Value-Attitude-Behaviour (VAB) model served as the underlying theoretical foundation for guiding the development of conceptual framework, enabling the researchers to understand how consumption values shape sustainable consumption behaviour in GenZ when viewed from the perspective of consuming FMCG products. While it is yet to be empirically-tested, proposed literature-backed CVBSF framework offers some key recommendations for scholars, policymakers, FMCG firms and NGOs committed to promoting & fostering sustainable consumption practices among the GenZ population in developing countries.

Keywords

Consumption values; Sustainable consumption attitude; Sustainable consumption behaviour: Environmental concern; VAB Model; GenZ; FMCG firms; Consumption value framework

Introduction

Adopting a sustainable lifestyle with responsible consumption practices is no longer an option (Hong *et al*., 2024). The current consumption patterns have led to ever-increasing environmental degradation, climate change, resource depletion, and increasing pollution (Syed *et al*., 2024). Thus, it is imperative than ever to shift production and consumption behaviors to sustainable lifestyles and consumption patterns, aimed at reducing waste and carbon footprints (Hong *et al*., 2024; Rizkalla, 2018). Sustainable consumption emphasizes using products in a manner that lessens the negative influence on the environment, maximizes the social benefits, and maintains balanced economic well-being (Richard, 2025). It is no longer a luxury but an obligation for current and future generations. Sustainable consumption contributes not only to less waste but also towards subsiding the effects of global warming (Hong *et al*., 2024; Kals, Strubel and Hellbrück, 2025; Suki, 2019).

However, developing countries are experiencing rapid growth and an increase in consumption levels due to multiple factors, often accompanied by unsustainable practices (Jain and Hudnurkar, 2022; Shahbaz *et al*., 2022). A significant contributor to this issue is the Fast-Moving Consumer Goods (FMCG) industry. Owing to the high volume of FMCG consumption daily, coupled with their often-short lifespans and excessive packaging, substantial waste generation has become a major environmental challenge (Chakraborty *et al*., 2021; Cheong, 2024; Jain and Hudnurkar, 2022; World Bank, 2022). The developing and underdeveloped countries have inefficient and outdated waste management systems, leading to a substantial chunk of waste being dumped into landfills and the ocean (Ahmed and Rashid, 2025). The notion of sustainable consumption is directly linked to the UN SDGs set, such as SDG 12 (Responsible Consumption), SDG 11 (Sustainable Cities and Communities), SDG 14 (Life below Water), and SDG 15 (Life on Land).

To achieve these ambitious goals, a paradigm shift is required in consumers' attitudes and behaviour to minimize the negative effects of living unsustainably (Yildirim, 2020). Gen-Z has the environmental awareness, yet there seems to be a substantial gap between their sustainable consumption attitude and their sustainable consumption behaviour, especially within FMCG product consumption (Szczepańska, 2024). This contrast poses a critical challenge, preventing Gen-Z from practicing sustainable consumption and mitigating environmental impact with respect to FMCG products (Shahbaz *et al*., 2022; Tassell and Aurisicchio, 2025).

This study examines how consumption values shape Gen-Z’s sustainable consumption behaviour and proposes a conceptual framework that can be empirically tested in developing countries. The Consumption Value-Based Sustainability Framework (CVBSF) offers theoretical and practical insights for policymakers, FMCG firms, and NGOs seeking to promote responsible consumption habits. By addressing the persistent challenge of unsustainable FMCG consumption, the study aligns closely with SDGs 11, 12, 14, and 15, contributing to waste reduction, enhanced community sustainability, and broader economic–environmental balance.

Literature Review

Towards Conceptualizing Sustainability and Sustainable Consumption

After decades of research, the notion of sustainability has significantly evolved from the Brundtland Commission's Foundation definition of "meeting current needs without compromising on future generations" to a multifaceted and multidimensional paradigm that includes protecting the environment and creating social balance while becoming economically viable. In the current dynamic environment, sustainability has become a focal point of our society. Moreover, given that the plastic waste is rapidly growing in developing countries (Ghaffar *et al*., 2023; Francis and Sarangi, 2022), it has become crucial to educate consumers about the identification and consumption of sustainable products, and for governments to impose regulations on organizations to create and maintain sustainable packaging (Jain and Hudnurkar, 2022). The United Nations Sustainability Goals (SDGs) are highly important and ambitious. The UN is creating a pathway to push these goals to be implemented across all economies on an urgent basis (Fatima, Ashraf and Zehraa, 2020). Through these goals, especially SDG 12 (Responsible Production and Consumption), a roadmap for developing circular economies has been laid down for nations to follow, transitioning them from the traditional linear development and consumption model of 'take-make-dispose' towards regenerative circular systems designed to reduce waste through efficient reduction, reuse, recycling, and recovery of the resources.

Sustainability is generally analyzed using the Triple Bottom Line Concept (TBL) by Eilert (2005), which relies on measuring the impact of actions on economic, social, and environmental aspects of a society (Jain and Hudnurkar, 2022). This study will focus on incorporating this TBL context into the conceptual model through Consumption Values, covering the economic aspect of consumption, Sustainable Consumption Attitude, and Sustainable Consumption Behaviour, covering the societal aspect, and Environmental Concern, filling in the environmental element into the model. Through this groundwork, individual and industrial transition and transformation are inevitable, especially in developing countries, where urbanization and consumption growth are exerting pressure on ecological resources. Recent scholars have underlined this interdependence and emphasized creating a balance between ecological integrity and human well-being, calling for the causes of resource depletion to be identified and rectified in order to create pathways to an equitable society (Garole, Reddy and Lippert, 2024; Richard, 2025).

Gen-Z Consumers

The Gen-Z (aged 12-27) population (especially born in urban settings) lives a life of continuous updates and innovation on social media sites such as Instagram, Facebook, and TikTok to keep pace with global and local trends of consumption (Kumar, 2024). They process the information at a relatively faster rate than the previous generations that exhibited hybrid consumption patterns and concatenated traditional frugality with high-tech digital behaviours (Jamal, 2020). Thus, the Gen-Z consumption pattern can be explained through the Theory of Consumption Values, including functional (price sensitivity), epistemic (novelty seeking), and emotional (identity projection) dimensions

that mediate their sustainable consumption behaviour through sustainable consumption attitude.

Gen-Z: Values, Attitudes and Behaviours Towards FMCG Products

With FMCG product lifecycles getting shorter, along with the acceleration of daily consumption rates and extensive product packaging being used, excessive waste is produced, giving way to significant environmental challenges (Chakraborty *et al*., 2021; Cheong, 2024; Jain and Hudnurkar, 2022; World Bank, 2022). Much of the research has been done in the sustainable consumption behaviour context, providing sufficient literature insights and key predictions at a global scale. However, in the case of developing countries where FMCG markets represent irregular consumption patterns, there is a need for an in-depth evaluation of consumption behaviours, especially for Gen-Z (Batool, Shabbir and Abrar, 2024; Dhir *et al*., 2021). This imperative calls for a profound comprehension of buyer preferences and socioeconomic attributes to inform practices and strictly conform to ethical and environmental benchmarks (Badar *et al*., 2023). Therefore, consumption values and sustainable consumption behaviours are antecedents and consequences, especially in the FMCG context of Gen-Z. Gen-Z are significantly more aware of the environmental issues than the previous generations, yet it is not reflected in their attitude and behaviour (Dragolea *et al*., 2023; Szczepańska, 2024). Hence, the determinants of Gen-Z consumption behaviour may potentially provide a framework for policymakers in mitigating the waste crises and plastic pollution linked to FMCG products.

Sustainable Consumption Behaviour and Gen-Z

With increasing purchasing power, Gen-Z is reshaping FMCG markets and emerging as stakeholders influencing sustainability agendas (Jain and Hudnurkar, 2022). They tend to prefer sustainable packaging when aware of environmental impacts, yet higher prices remain a major barrier in developing countries. This reveals a structural challenge: sustainability preferences often fail to translate into behaviour due to affordability constraints. However, inflated prices of sustainable products may obscure them from buying such products in the developing countries that are already highly price sensitive (Jain and Hudnurkar, 2022).

FMCG Sector in Developing Countries

The Fast-Moving-Consumer Goods (FMCG) industry is distinguished by a swift product turnover rate and substantially high consumer demand, encompassing a very wide variety of products, including food and beverages, personal care items, household items, and over-the-counter (OTC) medicines. In developing countries, the FMCG market is experiencing a significant upturn, which is why it is labelled as one of the most dynamic and prosperous segments of the economy (Ejiga and Okeke, 2024; Sharma *et al*., 2019). This sector has attracted substantial new investments, showing keen interest in investing millions of dollars. Ever since the industrial era, the sector has been growing at an exponential rate by producing and selling products to keep the high demand of consumers. It is now largely driven by middle-class Gen-Z consumers, seeking branded and packaged goods across various categories such as personal care, baby care, food,

and beverages (Kumar, 2024). This constant growth in consumer product sales is exerting a positive influence on ancillary sectors, including retail, e-commerce, packaging, advertising, media, and, not to mention, sports and entertainment industries, all experiencing significant growth (Imran *et al*., 2024). The key players in this sector are some multinational corporations such as Procter and Gamble, Unilever, and Nestlé, which are challenged by local firms of the countries (Ameh, 2024). Despite rapid growth, the sector struggles to balance market expansion with environmental sustainability in cost-sensitive economies.

Impact of FMCG Products on Waste Generation

As underlined by Omozele and Gift (2024), the FMCG companies are vital to the economic growth, which is attributed to fast inventory and a substantially higher consumption rate. Small and Medium-sized Enterprises (SMEs) contribute to a significant share of this market. They are dynamic in their approach to competing in the market by bringing product innovation, catering to diverse customer needs, process automation to efficiently and effectively optimize their supply chain, bringing economic growth, creating significant jobs, and contributing to the country's overall development (Omozele and Gift, 2024).

Due to rapid economic growth, companies and consumers both massively consume natural resources, giving way to environmental degradation, leading to some major environmental issues (Luo, Li, and Sun, 2022; Peiris, 2023). FMCG corporations are the preeminent drivers of the single-use economy (Nwabekee *et al*., 2024). Consequently, the shorter shelf-life and over-packaging of products significantly contribute to the ongoing global plastic waste crisis (Liyanage *et al*., 2025; Pauer *et al*., 2019). Moreover, the FMCG companies have reportedly not indicated any intention to halt the expansion of single-use plastic production and marketing activities (Deborah and Sugihartanto, 2024). The prevalence of plastic waste in FMCG organizations is not merely confined to post-consumer use but is also inherent in each stage of the supply chain operations. High production FMCG companies, by nature of their extensive production processes, generate substantial industrial waste, including plastic residues, thus leading to detrimental environmental consequences (Nwabekee *et al*., 2024). The rapid growth within this sector has directly influenced both operational efficiency and the subsequent environmental footprint, leading to an augmented release of toxic substances into soil and aquatic systems (Ahmad *et al*., 2019; Deborah and Sugihartanto, 202).

It is therefore crucial to push for corporate legal responsibility and promote practices like the circular economy for smart waste management and environmental sustainability (Cheong, 2024). Due to substantial consumption of non-biodegradable products by consumers, the landfill capacities are rapidly being exhausted, posing a critical challenge for developing countries in managing their solid waste. The FMCG sector contributes significantly to the consumption of plastics and other non-biodegradable items (Cheong, 2024; Jain and Hudnurkar, 2022). The growing purchasing power of Gen-Z further intensifies FMCG product demand, underscoring the need for organizational behavioural change and sustainable product innovation (Jain and Hudnurkar, 2022).

Guiding Theoretical Frameworks

Value-Attitude-Behaviour (VAB) Model

The Value–Attitude–Behaviour (VAB) model posits that individuals' value systems serve as foundational drivers of their behavioural choices, guiding actions that align with personally desirable goals. This value-behaviour relationship seems straightforward, but an abstract concept, such as values that are peripheral predictors of individual behaviour that makes this phenomenon multifaceted. Therefore, a less complex variable, such as attitude, acting as a proximal predictor, is needed to evaluate behaviour. Accordingly, this justifies the Value-Attitude-Behaviour (VAB) Model, suggesting that values shape behaviour through attitudes. This chain demonstrates a clearer path, from abstract (i.e., values) to midrange (i.e., attitude) to a more specific action (i.e., behaviour) (Činjarević, Kapo, and Turulja, 2022; Homer and Kahle, 1988). Over time, many scholars have validated the VAB Model in the realm of sustainable purchase and consumption behaviour of individuals (Cheung and To, 2019; Han *et al*., 2019; Kim *et al*., 2021; Whitley *et al*., 2016)

VAB and Sustainable Consumption Behaviour

The Value-Attitude-Behaviour (VAB) model provides a framework where values are predictive of attitude that subsequently influences human behaviour (Teng *et al*., 2014). Values are understood as personal and social cognitive constructs that guide the selection of personally or morally desirable decisions (Cheung and To, 2019). Kim and Hall (2021) define attitude as an individual's ability to respond to favourable or unfavourable circumstances. According to Cheung and To (2019), behaviours are manifestations of intentions indicating an individual's willingness to take actions. The VAB model is implemented to evaluate various aspects to sustainable consumption behaviour, such as green purchasing behaviour (Cheung and To, 2019), willingness to sacrifice for environmental causes (Han *et al*., 2019), functional food consumption intentions (Tudoran, Olsen, and Dopico, 2009), internet purchase intentions (Lee *et al*., 2019), food waste inhibition practices (Kim and Hall, 2021), sustainable crowdfunding (Kim and Hall, 2021), and environmental friendly actions (Kim and Yun, 2019). Habib *et al*. (2023) and Deng, Mo, and Liu (2014) empirically validated the VAB model by applying it to analyze consumer behaviour. Also, previous studies have confirmed the VAB model's robustness in identifying sustainable consumption patterns (Kim and Hall, 2021).

Within environmental contexts, values such as wildlife significance (Fulton, Manfredo and Lipscomb, 1996; Habib *et al*., 2023), self-enhancement (Milfont, Duckitt and Wagner, 2010), biospheric/altruistic considerations (Jacobs *et al*., 2018), and perceived value (Kim and Hall, 2021) are identified as crucial determinants shaping attitude and consequently influencing consumer behaviour. Specifically, Manan (2016) indicated that in the context of curtailing food waste, values encompass social norms and personal lifestyle preferences that underpin the motivational factors influencing consumer attitude and behaviour. Subsequently, this study employs the VAB model's hierarchical structure to scrutinize the interplay between values, sustainable consumption attitude, and actual sustainable consumption behaviour. Also, the fundamental motivation for choosing the VAB model is that there exists a gap between consumer values and their approach to

handling environmental issues through their consumption behaviour (Cheung and To, 2019; Mehrotra *et al*., 2024). By applying this model, we will be able to better understand how their consumption values, through their sustainable consumption attitude, translate into their sustainable consumption behaviour.

Theory of Consumption Values (TCV)

The Theory of Consumption Values (TCV) was formed by Sheth, Newman, and Gross (1991) and offers valuable contributions to the theoretical and practical understanding of how values influence a consumer in buying and consumption of products and services (Tanrikulu, 2021). TCV examines the individual's consumption values from a consumer behaviour perspective (Boksberger and Melsen, 2011; Tanrikulu, 2021), which makes it applicable to a wide range of consumption products, especially in the FMCG context.

TVC and Sustainable Consumption Behaviour

Learning about FMCG products facilitates evaluating consumer values and mitigating negative perceptions about the FMCG products and services. Also, customer awareness as a risk-management strategy (Dholakia, 2001) has a favourable effect on sustainable consumption behaviour (Chwialkowska and Flicinska-Turkiewicz, 2020). Past studies support a positive relationship between environmental knowledge and sustainable consumption attitude (Cleveland, Kalamas, and Laroche, 2012; Kumar, Manrai, and Manrai, 2017; Lin and Huang, 2012; Peattie and Peattie, 2009; Pekkanen *et al*., 2018; Tanner and Wölfing Kast, 2003; Tantawi *et al*., 2009; Young *et al*., 2010). There is a greater chance that consumers who are better informed appreciate the utilitarian and social benefits of FMCG offerings, hence, cementing their commitment to health and the environment through their buying decisions.

Methodology

The study followed a well-established approach of reviewing and synthesizing prior literature on consumption values and sustainable consumption behaviour. All the variables mentioned in the proposed conceptual model (including enablers, intermediaries, and responses) were derived from peer-reviewed literature to ensure conceptual rigour and theoretical alignment. A prescriptive theory synthesis approach, as recommended by Jaakkola (2020) and Marzi *et al*. (2025), guided the integration of fragmented theoretical insights into a cohesive conceptual model. This method enables the construction of new theoretical perspectives by combining overlapping constructs and addressing gaps in existing theories (Shi *et al*., 2018). The synthesis combined the Theory of Consumption Values (Sheth, Newman and Gross, 1991) and the Value-Attitude-Behaviour (VAB) Model (Homer and Kahle, 1998) to explore sustainable consumption behaviour among Generation Z consumers in developing-country contexts. The Theory of Consumption Values provides perspectives on consumption values as behavioural enablers, while the VAB Model clarifies the attitudinal mechanisms linking values to outcomes. Together, these theories frame the relationship between consumption values, sustainable consumption attitudes, and resulting behaviours.

The development of the conceptual framework followed four key steps:

Step 1: Identification and Selection of Relevant Theories

The authors first carried out a thorough literature review to link the sustainable consumption behaviour construct with related theories using the PRISMA approach to ensure thorough coverage in the context. Keeping in mind the relevance of the scope of study, the search was based on two well-established databases, i.e., Web of Science and Scopus, involving a combination of keywords such as 'Sustainable Consumption Behaviour', 'Behaviour Theory of Consumption Values', 'VAB Model', 'FMCG Products', and 'GenZ'. The search time window was September 10 to October 20, 2025. A considerable amount of time was spent searching, downloading, filtering and going through the relevant literature for this research. As part of the search criteria, we only focused on the studies that were related to the individual or a combination of key variables including the underlying theories that guided this research. After the initial screening, the search generated over 400 studies published during the last 10 years (2015-2025). After filtering, it was identified that only 266 studies were related to the Theory of Consumption Values, 32 discussed the VAB model, 30 addressed the Gen-Z population, and only 10 studies were in the FMCG context. The remaining 194 articles were assessed through their abstracts. 42 articles were excluded due to inaccessibility of full text, irrelevant industry, population, or duplication of contents. In the end, 152 articles were included in the qualitative synthesis to develop a proposed conceptual framework.

Step 2: Extraction of Core Variables for the Framework

In the second step, we extracted key relevant variables for the framework from the finalized 152 papers. After removing the duplicated variables, a total of 8 unique variables were found and subsequently assigned to the framework. Moreover, it was also necessary to understand the operational definitions of these variables to ensure whether these were consistent with the proposed concept or otherwise.

Table 1: Key Variables Used in the Conceptual Framework

S. No.	*Variables*	*Operational Definition*	*Sources*
1.	Functional Values	The tangible utility and operational effectiveness of any product or service, including the reliability and durability (Sheth, Newman and Gross, 1991).	Majeed *et al*. (2021); Mason *et al*. (2023); Qasim *et al*. (2019), Han *et al.* (2017)
2.	Social Values	The individuals deriving perceived value from entangling with specific group or groups in society (Sheth, Newman and Gross, 1991).	Amin and Tarun (2020); Pickett-Baker and Ozaki (2008); Straughan and Roberts (1999)

S. No.	*Variables*	*Operational Definition*	*Sources*
3.	Emotional Values	The perceived utility that is derived from the intensity of emotional reactions, memories, and affective states that a product or service elicits (Sheth, Newman and Gross, 1991).	Sweeney and Soutar (2001); Cawley (2004); Wang *et al*. (2004)
4.	Conditional Values	The ostensible profit accrued from selecting the outcome within a specific context or set of conditions that inform decision-makers (Sheth, Newman and Gross, 1991).	Sánchez-Fernández and Iniesta-Bonillo (2007); Biswas and Roy (2015); Ganak *et al*. (2020); Shehzad *et al*. (2020)
5.	Epistemic Values	It is the individual's inclination toward acquiring product-specific knowledge before purchase, such as product ingredients, operational instructions, and consumption benefits and safety (Lin and Huang, 2012).	Lin and Huang (2012); Dholakia (2001)
6.	Sustainable Consumption Attitude	It is an individual's beliefs, emotions, preferences, and intentions that the person has for the environment (Othman et al. 2013).	Sweldens *et al*. (2014); Othman *et al*. (2013); Yang, Zhang and Wei. (2022); Stern (2000); Barr (2007); Kaiser *et al*. (2007)
7.	Sustainable Consumption Behaviour	It includes the selection, purchase, consumption, and disposition of products and services, minimizing any environmental detriment, yet fulfilling the basic needs and sustaining and enhancing the quality of life (Purvis, Mao and Robinson, 2018).	Hong *et al*. (2024); Garad and Khalifa (2024); Ezeh *et al*. (2024); Ha *et al*. (2021), Khan *et al*. (2020); Hoang Yen and Hoang (2023); Dilotsotlhe and Duh (2021)
8.	Environmental Concern	The degree to which people are aware of problems regarding the environment and support efforts to solve them, and or indicate the willingness to contribute personally to their solution (Dunlap and Jones, 2002)	Peñasco and Grossman (2025); Gifford and Nilsson (2014); Barrera-Verdugo and Durán-Sandoval (2024); Chalupka *et al.* (2023); Zeng *et al*. (2023); An and Kim (2022); Waheed *et al*. (2023);

S. No.	*Variables*	*Operational Definition*	*Sources*
			Noor and Kuswati (2023); Halim and Chuah (2023)

Step 3: Mapping and Integration of the Key Variables into the Framework

After finalizing the key variables, the proposed conceptual framework was developed based on three different dimensions, i.e., Enablers, Intermediaries, and Responses. These were contextually aligned and logically linked to ensure comprehensive meaning within the framework when viewed as a whole. The summary of the PRISMA guided methodology has been presented in figure 1 below.

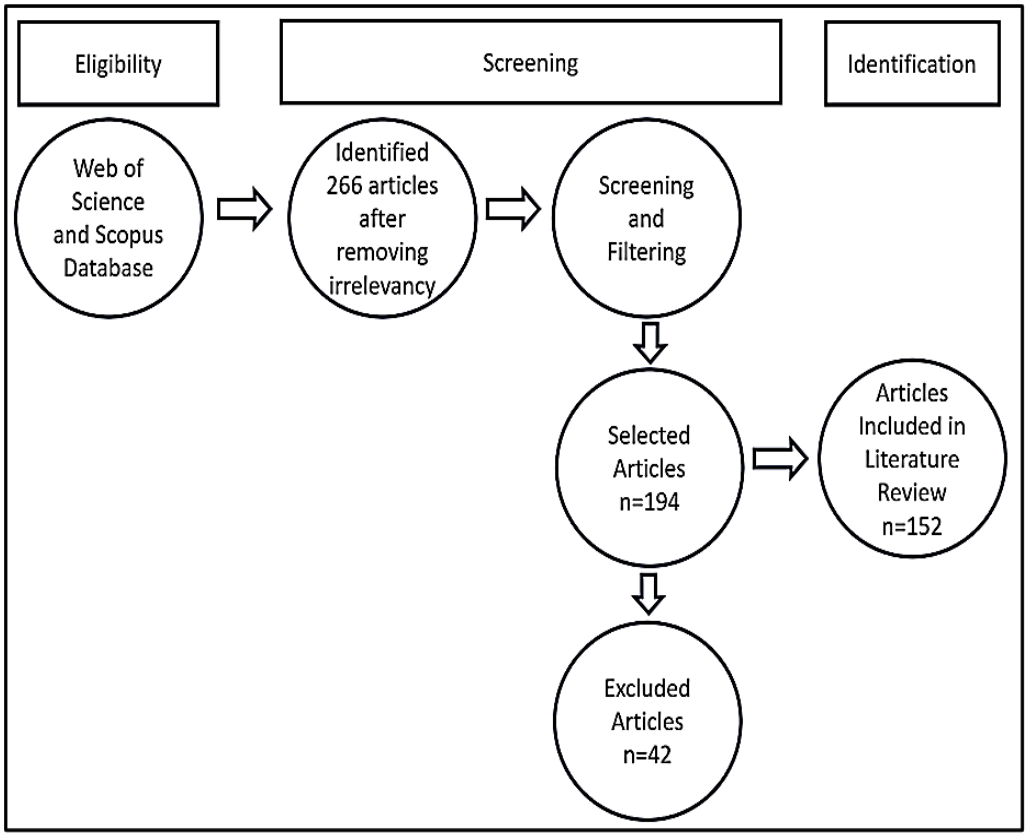

Figure 1: PRISMA flow chart employed in the present study

Proposed Conceptual Framework: Enablers, Intermediaries & Responses

Developing the conceptual framework involved an extensive review of the extant literature related to sustainability and consumption behaviour trends and practices in both developed and developing countries. It also involved studying the theory of Consumption Values and the VAB Model for the FMCG products consumption and reviewing the literature for environmental concern as an intervening variable. The conceptual model illustrated in figure 2 represents the antecedents of Sustainable

Consumption Behaviour by integrating two theories, i.e., Sheth, Newman and Gross (1991)'s Theory of Consumption Values and the VAB Model (Homer and Kahle, 1998). The proposed model depicts that the Sustainable Consumption Behaviour is influenced by Consumption Values through Sustainable Consumption Attitude, with Environmental Concern playing a key role as a moderator impacting the association between Sustainable Consumption Attitude and Sustainable Consumption Behaviour.

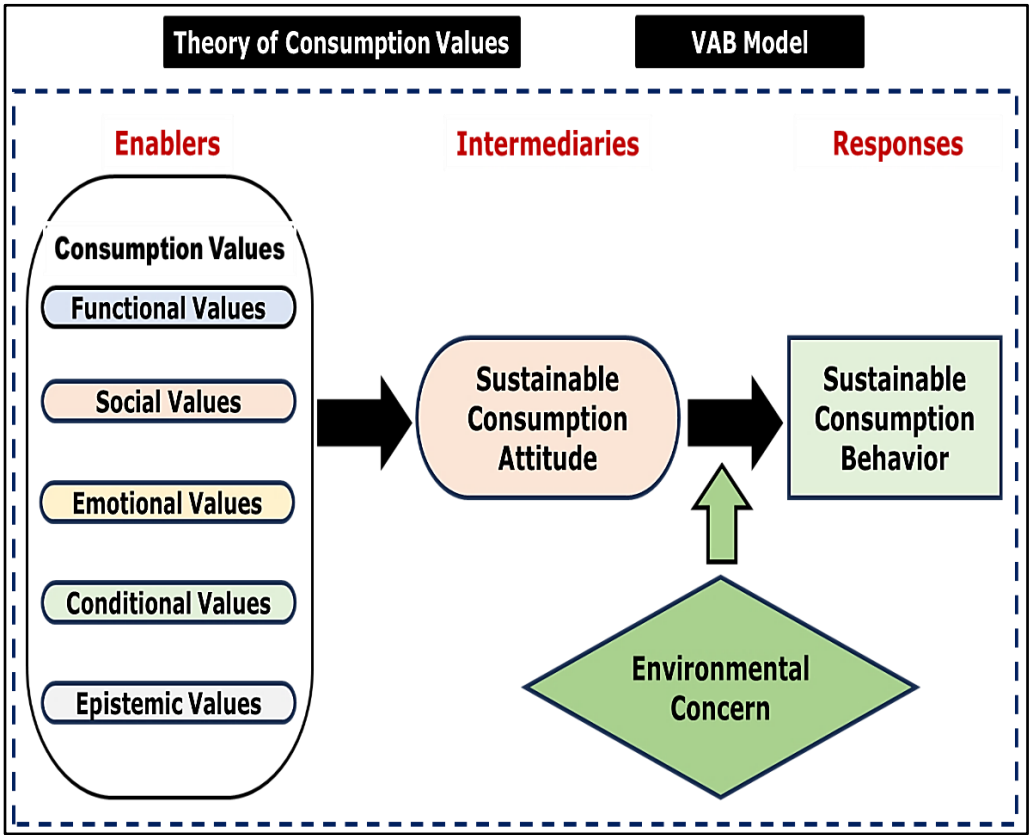

Figure 2: Consumption Value-Based Sustainability Framework (CVBSF) for FMCG Firms

Enablers

Consumption Values

Consumption Value consists of the following values:

- *Functional Values:* The functional values refer to the tangible utility and operational effectiveness of any product or service, including the reliability and durability. Majeed, Ahmed, and Rasheed (2021) have identified functional values as a core antecedent of consumers' purchase decisions. It is through this factor that the consumer determines the performance of a product with respect to its cost, consistency, dependability, and longevity (Mason *et al.*, 2023). Qasim *et al*. (2019) classified it into two essential components: quality and price. Consumers usually evaluate the value of

FMCG products or services through price-quality assessment before the purchase decision (Han *et al*., 2017). Other attributes like user comfort, usability, functionality, dependability, and environmental benefits also contribute significantly to consumer selection and purchase of FMCG products (Zang *et al*., 2007). Furthermore, previous studies highlighted that perceived monetary benefits have a crucial place in the informed decision-making process (Han *et al*., 2017).

- *Social Values:* The notion of social values is an important concept based on individuals deriving perceived value from entangling with specific group or groups in society (Sheth, Newman, and Gross, 1991). This may include peer influence, social pressure, or even social norms. Ajzen's (1991) model of the Theory of Planned Behaviour (TPB) further elaborates this concept with subjective norms through which consumers feel social pressure when selecting products. Scholars underline that it also has a substantial influence on consumer decision-making processes (Amin and Tarun, 2020; Pickett-Baker and Ozaki, 2008). Past studies have indicated that perception of social responsibility can substantially influence consumption attitude (Amin and Tarun, 2020; Straughan and Roberts, 1999).
- *Emotional Values:* Sheth, Newman and Gross (1991) define this as the perceived utility that is derived from the intensity of emotional reactions, memories, and affective states that a product or service elicits. Sweeney and Soutar (2001) indicate that product attributes and service offerings are notably interrelated with emotional responses as these constructs incorporate the entire spectrum of utilitarian and hedonic dimensions. Against the backdrop of sustainable consumption, it is widely accepted that consumers exhibit strong concern regarding the societal and environmental implications of their purchases (Cawley, 2004). A contrasting perspective by Wang *et al.* (2004) highlights that emotional values may not hold a significant impact on purchase decisions or behavioural intentions, thereby their influence on sustainable attitude may be minimal.
- *Conditional Values:* The concept of conditional value pertains to the ostensible profit accrued from selecting the outcome within a specific context or set of conditions that inform decision-makers (Sheth, Newman and Gross, 1991). Scholars such as Sánchez-Fernández and Iniesta-Bonillo (2007) posit that conditional value relies on a certain product value, which can be enhanced by a multitude of physical, economic, social, or environmental variables. These conditions, in turn, augment the product's other values, such as functional and social values. Conditional value is based on receiving an advantage bounded by any specific conditions that the product offers (Biswas and Roy, 2015). This reinforces the decision-making process by limiting or even anticipating the outcome of any given choice. It is an indispensable factor in consumer behavior, deeply entangled with a product's attributes, that significantly influences the selection and purchase of products. Other scholars emphasize that conditional values are instrumental in influencing consumers' intentions to select sustainable products (Ganak *et al*., 2020; Shehzad *et al*., 2020).
- *Epistemic Values:* Lin and Huang (2012) describe the concept of epistemic values as very different from that of product characteristics, explaining that it is the individual's inclination toward acquiring product-specific knowledge before purchase, such as product ingredients, operational instructions, and consumption benefits and safety. This may include scrutinizing product labels, manufacturing process, expiry date, validating its eco-friendly certification, and environmental consequences (Lin and Huang, 2012). Consumers are now becoming considerably well-informed about the

products and their manufacturing elements throughout their decision-making process (Lin and Huang, 2012). Dholakia (2001) suggests that while purchasing organic foods, epistemic values serve to boost consumers' confidence, increase engagement with the product, and reduce the overall purchase risk, thereby exerting a substantial influence on purchase decisions.

Intermediaries

Sustainable Consumption Attitude

Mindfulness or awareness is a preemptive requirement to construct a certain attitude, as it is one of the most fundamental drivers of human behaviour, instigating which stimuli a person approaches or avoids (Sweldens, Corneille and Yzerbyt, 2014). Othman *et al*. (2013) emphasize that a sustainable consumption attitude is an individual's beliefs, emotions, preferences, and intentions that person has for the environment. This belief system significantly influences their purchasing decisions and consumption patterns, as it indicates their positive or negative judgment of sustainable products (Yang, Zhang and Wei, 2022). Barr (2007) suggested that a person's attitude towards sustainable consumption can be determined by their ecological activities. Environmental psychologists report that individuals with a strong sustainable consumption attitude are more sensitive than a regular person to environmental issues and demonstrate a greater disposition to participate in pro-environmental initiatives to mitigate their environmental footprint (Stern, 2000). Such an attitude includes concern for various environmental domains, such as air quality, waste management, recycling, and water conservation, among others (Kaiser, Oerke and Bogner, 2007). Previous studies indicate a clear relationship between sustainable consumption attitude and the genuine adoption of sustainable consumption behaviour (Barr, 2007).

Hence, to inculcate sustainability in society, a significant positive attitude is a crucial element in the development of sustainable consumption (Bernardes *et al*., 2018; Yang, Zhang and Wei, 2022). However, individuals in the developing and underdeveloped countries have relatively lesser understanding of sustainability due to certain social, economic, and environmental issues, leading to lesser predisposition for such behaviours (Fischer *et al*., 2017; Piligrimien *et al*., 2020; Wang and Wu, 2016; Yaqub *et al*., 2024). This contrasts sharply with the developed countries, where the public and government patronize sustainability practices and consider it a means to attain sustainable growth (Dar *et al*., 2022; Palaschuk *et al*., 2022; Pyankova and Arkalov, 2022). A strong affirmative approach toward sustainable consumption results in consuming products and services that are aligned with better health and preservation of the natural resources (Duadji and Tresiana, 2022; Serebryakova *et al*., 2022; Surya *et al*., 2020). Yet, several studies have reported a gap in the attitude-behavior relationship, indicating that despite having a positive attitude towards sustainable consumption, many consumers fail to translate their attitude into their consumption behaviours (Shahbaz *et al*., 2022; Szczepańska, 2024; White, Hardisty, and Habib, 2019).

Consumption Values and Sustainable Consumption Attitude (CV → SCA)

Mäntymäki, Islam and Benbasat (2019) in their value theory suggest that individual actions are primarily driven by their desires. Choe and Kim (2018) empirically showed that functional, social, emotional, conditional, and epistemic values collectively mediate attitudinal formation, thereby engendering resilient, sustainable consumption behaviors. Consumption values linked to Sustainable Consumption Attitude (SCA) are supported by past studies (Wang, Yang and Maresova, 2020). Thus, consumers who are more inclined towards strong social responsibility, environment-friendly, and innovative products are more likely to develop positive intentions towards sustainable consumption behaviour. For example, consumers who are concerned about conserving energy are inclined to purchase products that are more energy efficient, while those who have higher social values will opt for brands that have a reputation for implementing fair labor practices.

Response

Sustainable Consumption Behaviour

Sustainable consumption includes the selection, purchase, consumption, and disposition of products and services, minimizing any environmental detriment, yet fulfilling the basic needs and sustaining and enhancing the quality of life (Purvis, Mao and Robinson, 2018). The United Nations Environmental Program (2023) defines sustainable consumption as "doing better and more with less" without resource wastage and destruction. Researchers have identified a significant disconnect between sustainable attitude and consumption behaviour, which is often called the "green gap" (Garad and Khalifa, 2024; Hong *et al*., 2024). Previous studies indicate a shift in consumption behaviour, especially in the Gen-Z segment, highlighting that conventional Gen-Z customers are transitioning to purchasing more sustainable products and services, believing that these practices fulfil their values and beliefs (Ha *et al*., 2021; Khan *et al*., 2020). This momentous change in their consumption behaviour is directly aligned with global initiatives toward societal awareness and environmental stewardship, urging people to adopt practices that are ethical and environmentally oriented, leading to the building of social equity.

Moreover, this trend is prominent in the FMCG sector, where consumers are trying to create an ecological balance by consciously selecting eco-friendly products in food, personal care, and other grocery and household items, and shunning items that cause harm to the environment. Consequently, many FMCG companies are shifting toward sustainable manufacturing and showcasing their products and packaging as organic, environmentally friendly, and fair trade compliant (Ezeh *et al*., 2024). Furthermore, many FMCG firms are considering moving to a sustainable supply chain to rectify the damages caused by their current practices and contribute towards a sustainability-driven market. Studies in developing contexts (Dilotsotlhe and Duh, 2021; Hoang Yen and Hoang, 2023) identify three critical barriers to this discourse: higher costs of sustainable alternatives, limited accessibility, and insufficient information transparency (Azhar *et al*., 2024).

Sustainable Consumption Attitude and Sustainable Consumption Behaviour (SCA→ SCB)

Schultz (2001) suggested that in order to be sustainable consumption-oriented, consumers have to exhibit environmentally responsible behaviour, which includes shifting from consuming conventional non-eco-friendly products to selecting, purchasing, and consuming eco-friendly products. In other words, they must take environmentally responsible decisions and transition towards a sustainable lifestyle (Kollmuss and Agyeman, 2002). Hence, while attitude is crucial for forming behaviours, it is not the sole determinant, as there could be other factors as well. To fundamentally change an individual's attitude, it is essential to first raise awareness about environmental understanding; only then can behaviour be forecasted (Maibach, 1993). According to Ajzen (2005), variables such as awareness and attitude are critical indicators of an individual's behavior; although it is not certain that the shift in attitude will inevitably translate into a change in behaviour. Attitudes are shaped by underlying values (Schultz, 2001) and other unseen complex psychological factors (Allendorf *et al*., 2006; Bhardwaj *et al*., 2024).

Given that attitude contributes to the formation of behaviour, analyzing sustainable consumer attitude can be a strong instrument in comprehending sustainable consumer practices and thereby anticipating their conservation behaviours (Durmaz and Akdoğan, 2025). Hence, the model is premised on the notion that a positive Sustainable Consumption Attitude is conducive to actual Sustainable Consumption Behaviour. This association is substantiated by a large quantity of academic research situated within the environmental and prosocial behaviour paradigms, exemplified by the pioneering works of Ajzen (1991) and other scholars like Bamberg and Möser (2007). Furthermore, Yaqub *et al*. (2024) reported empirical evidence of this linkage in the domain of sustainable consumption. It is generally established that individuals who have a favourable attitude towards sustainable practices have a greater probability of buying environmentally friendly products, resulting in reduced waste and efficient resource utilization.

Environmental Concern

A key indicator in this study is the Environmental Concern (EC), which influences the relationship between Sustainable Consumption Attitude and Sustainable Consumption Behaviour. Environmental Concern constitutes a central psychological variable in sustainability research, defined as "the degree to which people are aware of problems regarding the environment and support efforts to solve them, and or indicate the willingness to contribute personally to their solution" (Dunlap and Jones, 2002). The EC reflects individuals' awareness of anthropogenic environmental degradation and their commitment to mitigation (Dunlap and Jones, 2002; Kim and Choi, 2005). Scholars applied the construct in various settings, such as in attitudinal studies, linking it to socioeconomics and demographic factors (e.g., nationality, class, age); experimental studies connecting it to social-psychological frameworks like norm-activation theory, and lastly in applied behavioral research, dealing with practices like recycling and energy conservation (Alibeli and Johnson, 2009; Buttel, 1987).

Environmental Concern is dynamically formed by social and individual antecedents, such as education, cultural values, experiences gained in childhood, political views, as well as societal norms (Gifford and Nilsson, 2014; Peñasco and Grossman, 2025). Its global salience has intensified due to visible climate crises like extreme weather, resource scarcity, and urbanization pressures (Barrera-Verdugo and Durán-Sandoval, 2024; Chalupka, Latter, and Trombley, 2023; Yoon, 2014). From a critical point of view, EC motivates multiple environment-friendly behaviours across various domains, such as personal behaviour, organizational practices, and policy development (Zehui, 2023), including water consumption (Avcı, 2023) and other ethical usage of natural resources (An and Kim, 2022; Barrera-Verdugo and Durán-Sandoval, 2024; Zeng, Zhong, and Naz, 2023). As EC profoundly influences Sustainable Consumption Attitude and Sustainable Consumption Behaviour, it is therefore essential for researchers to incorporate EC in their studies to understand the underlying connection between their constructs (Halim and Chuah, 2023; Noor and Kuswati, 2023; Waheed *et al*., 2023). Thus, EC is clearly relevant and of high significance to sustainable consumption behavior (SCB), making it crucial for studying decision-making in the FMCG sector, especially for developing countries where environmental trade-offs are more pronounced.

Influence of Environmental Concern on the Linkage Between Sustainable Consumption Attitude and Sustainable Consumption Behaviour

In the context of the Value-Attitude-Behavior (VAB) model, Environmental Concern (EC) acts as a critical moderator that amplifies the relationship between Sustainable Consumption Attitude (SCA) and Sustainable Consumption Behavior (SCB), thereby indirectly shaping SCB (Ghaffar *et al*., 2023). Unlike direct-effect models (e.g., VBN theory; Lavuri, Akram, and Akram, 2023), the VAB model positions EC as an enhancer that intensifies SCB driven by core consumption values (functional, social, emotional, conditional, and epistemic), translated into shaping the Sustainable Consumption Behaviour. It is empirically evident that consumers prioritize pro-environmental values when they have a higher level of EC (e.g., emotional connection to nature) over competing motives (e.g., functional cost); exhibiting stronger SCB even when sustainable options entail sacrifices (e.g., price premiums) (de Groot and Steg, 2009; Hosta and Zabkar, 2020).

Environmental Concern as a moderating role expresses a diversity of behaviour in consumers, highlighting individuals who have similar consumption values, but different EC levels may exhibit radically different sustainable consumption behaviour (Nanggong and Rahmatia, 2019). For example, consumers who are ‘pleasure-seekers’ (Nasir, 2023) or socially pressured to go green (Hasan *et al*., 2023) would seek to purchase organic food if they are internally motivated by strong environmental concerns. Thus, the CVBSF model explains that for FMCG products consumption, EC acts like a catalyst, turning Gen-Z sustainable consumption attitude into sustainable consumption behaviour. It may help resolve the "action-behavior gap" by accounting for how sustainable consumption attitude translates into actionable sustainable consumption behaviour. Environmental Concern is illustrated in the framework as an independent diamond-shaped construct, emblematic of its profound impact. The directed line originating from Environmental Concern and converging upon the path linking Sustainable Consumption Attitude to Sustainable Consumption Behaviour (EC → (SCA → SCB)) suggests a

moderating or mediating function. This indicates that the person's environmental concern can either increase or decrease between their attitude translating to their behaviour. Essentially, this proposed framework provides a solid base for understanding how EC as a moderator can influence sustainable consumption behaviour. This framework combines the consumer values with the attitude-behaviour model and environmental concern, creating a reference point for both academic and strategic plans, focusing on fostering a society that will be more environmentally responsible.

Implications and Contribution

The conceptual framework offers several theoretical, practical, and SDG-related implications:

Implications for Theory and Practice

- First, the study has contributed to the literature by integrating the Theory of Consumption Values and Value-Attitude-Behaviour Model. The proposed framework suggests that consumption values act as enablers to influence sustainable consumption attitude (intermediaries), which in turn shapes sustainable consumption behavior. Hence, the study has contributed to the literature by introducing an important mediating role of sustainable consumption attitude to impact the linkage between consumption values and sustainable consumption behavior. Moreover, the proposed model has also presented the intervening role of Environmental Concern (EC) between the intermediaries, i.e., sustainable consumption attitude and response factors like sustainable consumption behavior.
- Second, the study advances our understanding of sustainable consumption for Gen-Z by illustrating how emotional, functional, epistemic, social, and conditional values impact their attitude towards sustainable consumption, which eventually shape their behavior towards consuming FMCG products.
- Third, the study greatly supports the Theory of Consumption Values from the perspective of developing countries, as it uncovers important insights to assess value dimensions covering functional (cost-related), emotional (cultural influence), and epistemic (information through technology) related to consumer choices.

Implications for Policy and Practice

Implications for FMCG Firms

- First, the CVBSF, when practically implemented, acknowledges that Gen-Z sustainable consumption behaviour is not merely driven by cost-benefit analysis. Rather, this complex consumption behaviour is influenced by intricate and sometimes conflicting factors that include five key consumption values i.e. Functional Value (price, quality, performance, convenience), Social Value (status, peer influence, belonging), Emotional Value (pride, guilt reduction, connection to nature), Conditional Value (availability, affordability, infrastructure, clear labeling) and Epistemic Value (novelty, curiosity, knowledge-seeking). Consumption values are complex to understand as they vary from consumer to consumer.
- Second, given the FMCG industry's pervasive nature, frequent transactions, and close ties to household environmental impacts, the study offers critical insights by

incorporating TCV and VAB's fundamental principles, acknowledging EC's critical mediating function, and embedding this framework within the context of the FMCG environment in the developing countries. The CVBSF introduces an unparalleled level of detail for understanding the motivators and obstacles to eco-friendly consumption. It goes beyond generic models to offer a culturally and demographically sensitive analytical tool.

Implications for Gen-Z Consumers

- Crucially, the CVBSF considers Environmental Concern (EC) far beyond a simple parallel influence, highlighting its role as a pivotal moderating variable. EC acts as a powerful amplifier, intensifying the relationship between a set of consumption values and the formation of a positive attitude. For a Gen-Z consumer with high EC, even moderate functional sacrifices (e.g., paying slightly more for an organic product) become more acceptable, while social approval for sustainable choices and emotional rewards gain significantly greater motivational force. Conversely, low EC often results in functional value, immediate cost considerations, and dominates the decision-making process, potentially overriding other present values. This moderating role of EC is central to explaining the significant variability in sustainable behaviour observed within the Gen-Z population in the developing countries, even among individuals who express general support for environmental causes.

Implication for Government Environmental Authorities and NGOs

- First, it uncovers how the consumers' environmental concerns influence their sustainable consumption behaviours, paving the way for governments and NGOs to develop programs that create awareness campaigns to educate consumers about sustainable consumption of the FMCG products, thereby promoting environmental responsibility.
- Second, the study insights provide strategic recommendations for marketers to customize their approach in developing products that resonate with environmental policies of governments and align with consumption values of consumers, bringing them one step closer to adopting sustainable consumption behaviour.
- Third, the study assists the governments in designing and communicating programs highlighting tangible risks of environmental degradation and converting consumers into individuals oriented toward responsible consumption, empowering them to turn their attitude into meaningful actions to create a better sustainable society.

Implications for SDGs

SDG 11 (Sustainable Cities and Communities)

- The study addresses SDG 11 (Sustainable Cities and Communities), explaining the effect of various consumption values on individuals' consumption behaviours, which is crucial to achieving urban sustainability. The study emphasizes the importance of both functional values, leading to cost-effectiveness and durability of eco-friendly products and services, and social values, including notions like social status, derived from a sustainable style of living adhering to community norms. These values can play a central part in motivating and encouraging consumers to live a sustainable lifestyle in cities. This may include consumers giving preference to public

transportation, supporting local circular economies, and selecting energy-efficient devices for their homes. In this regard:

- CVBSF can motivate and encourage consumers to live a sustainable lifestyle in cities (SDG11).

SDG 12 (Responsible Consumption and Production)

- The study provides a consumption value-guided psychological perspectives by directly evaluating the links between consumption values (such as functional, social, emotional, conditional, and epistemic) and sustainable consumption behaviour. In terms of its specific contribution to SDG 12, the CVBSF particularly advises producers and consumers to consider the potential implications of consumption values on their respective production & consumption patterns by revisiting their choices respectively and systematically transforming to more sustainable alternatives.
- The study considers Environmental Concern as an imperative catalyst that helps alter an abstract concept of value into a sustainable consumption attitude and subsequently, into sustainable consumption behaviour, including actions such as inclination toward waste reduction, adoption of recyclable products, and following ethical purchasing. Particularly:
  - CVBSF can advise producers and consumers to revisit their choices for more sustainable alternatives (SDG 12).
  - CVBSF can help transform consumers' inclination toward waste reduction, adoption of recyclable products, and following ethical purchasing (SDG12).

SDG 15 (Life on Land)

- The proposed CVBSF is directly linked to achieving SDG 15 by highlighting the essential role of various consumption values in safeguarding the natural ecosystem. Accordingly, it suggests the role of functional values (which indicate the importance of having a viable soil for growing organic food), social values (which help nurture and maintain agricultural and urban lands through community-based programs) and epistemic values (which assist in designing educational programs to educate consumers about sustainable biodiversity and food chains) in shaping Sustainable Consumption Attitude (SCA). To this end:
  - CVBSF can help re-emphasize consumption values to safeguard Natural Resources, such as having a viable soil for growing organic food, help nurture and maintain agricultural and urban lands through community-based programs, and design educational programs to educate consumers about sustainable biodiversity and food chains (SDG 15).

Limitations & Future Research Recommendations

When applied across developing countries with diverse waste management infrastructure, cultural context, and consumers' age range (12 - 27), several limitations may arise, including the acceptability of consumption values by the younger and older Gen-Z cohort, having variable purchasing power, price sensitivity, and decision-making autonomy. Ethical consideration for the empirical study of the younger cohort will require obtaining parental and guardian consent, ensuring the questionnaire is filled out under their supervision. Also, the CVBSF framework considers Consumption behaviour

as a single output model, but further empirical studies may include reducing purchasing, substitutes, consumption, and disposal behavior as latent dimensions for separate testing.

The imperative lies in the rigorous empirical substantiation of the posited associations, particularly discerning the nuanced interplay between Environmental Concern as a moderator. Quantitative methodologies, incorporating surveys and structural equation modelling, are advocated to evaluate the robustness and directionality of these hypothesized connections. Future scholarly endeavors should explore multiple countries with multigroup testing, examining the intricate influence of cultural, socio-economic, and demographic variables on the framework's internal dynamics. The prevalence of diverse consumption values, the inception of sustainable consumption attitude, and the expression of environmental concern are contingent upon a multitude of contextual factors, which necessitate careful examination.

Conclusion

This study proposes a novel Consumption Value-Based Sustainability Framework (CVBSF) by combining TCV and VAB as guiding theories. The CVBSF addresses a critical and persistent challenge in sustainable consumption research by addressing a significant gap governing Generation Z's expressed pro-environmental values and how these shape their attitude and eventually guide behaviours for FMCG products when influenced by environmental concerns. The challenge governing Gen-Z consumers in developing countries is to inculcate such consumption values and attitudes that lead to sustainable consumption behaviours. Hence, the CVBSF provides a foundational structure for understanding the underlying mental processes that influence consumption values of the Gen-Z population and how these can lead to sustainable behaviours for creating meaningful impacts in the developing economies.

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Authors' Declarations and Essential Ethical Compliances

Authors' Contributions (in accordance with ICMJE criteria for authorship)

Contribution	*Author 1*	*Author 2*	*Author 3*	*Author 4*
Conceived and designed the research or analysis	Yes	Yes	Yes	Yes
Collected the data	No	Yes	No	No
Contributed to data analysis & interpretation	Yes	Yes	Yes	Yes
Wrote the article/paper	Yes	Yes	No	No
Critical revision of the article/paper	Yes	Yes	Yes	Yes
Editing of the article/paper	No	Yes	No	No
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